Applications

- Recoiling lines for metal strips, paper, textiles or non-wovens
- Tube inspection lines
- Length measurement of pre-cut tubes, profiles or plates
- Slitting lines
- Inspection lines
- Coating plants
- Cold rolling mills
- Hot rolling mills
- Wire mills
- Tube production
- Cut-to-length control for flying saws
- Mass-flow-measurement
- Plate mill and slab finishing lines
- Speed measurement on abrasive materials
- Process control





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Contact person VLM series

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Non-contact measurement with light



Measurement of velocity and length

ASTECH Angewandte Sensortechnik GmbH

VLM series

ASTECH

Advantages

Based on a CCD sensor the VLM500 implements the spatial filter technology for the optical determination of velocity and length of moving objects. The VLM500 works optically and contactless.

Dynamic and accurate

- Measuring range up to 50 m/s
- Accuracy < 0.025 %

Contactless and harmless

- Working distance 170 mm, 185 mm or 240 mm
- No slip
- No damage/contamination of measured object surface
- No dangerous laser radiation

Robust and reliable

- Rugged design for reliable use in harsh industry environments
- Immune to dirt and dust

Flexible and versatile

- Comprehensive parameterization for flexible operation
- Independent from object surface properties
- Versatile industrial interfaces
- Synchronous triggering of multiple gauges for mass-flow applications

Autonomic and easy-to-use

- Automatic adaption to properties of object surface
- Integrated sensor, lighting, optics, signal processing and interfaces – no external components
- Easy integration into existing processes and plants
- Easy mechanical installation
- No wear and free of maintenances

High Quality and cost-efficient

- Calibrated for lifetime
- 5 years warranty
- Made in Germany
- Expected lifetime > 20 years

| | VLM500A | VLM500D | VLM500L |
|--|---|---------------|----------------|
| Nominal distance and working range | (185 ± 7.5) mm | (240 ± 15) mm | (170 ± 7.5) mm |
| Extended working range | (185 ± 15) mm | (240 ± 30) mm | (170 ± 10) mm |
| Speed measuring range | 0.01 25 m/s | 0.008 15 m/s | 0.004 3.0 m/s |
| - with extended working range | 0.02 50 m/s | 0.016 30 m/s | 0.008 6.0 m/s |
| – with special filter FB2V | 0.006 3.5 m/s | 0.005 3 m/s | 0.001 1.5 m/s |
| in extended working range and FB2V | 0.012 7 m/s | 0.012 5.5 m/s | 0.002 3 m/s |
| Measuring uncertainty ¹⁾ | < 0.025 % at nominal working distance ^{2), 3)} | | |
| Reproducibility ¹⁾ | < 0.025 % | | |
| Length measuring range | internal measuring range up to 1,000,000 km | | |
| Detector | CCD sensor/spatial filter | | |
| Light source | LED | | |
| Power supply | 24 VDC | | |
| Power consumption | max. 25 W | | |
| Temperature range | 0 °C 50 °C | | |
| Protection class | IP 65 | | |
| EMC | Industrial standard in compliance with CE | | |
| Case size without connectors | 260 mm x 160 mm x 90 mm ²⁾ | | |
| Weight | 3.3 kg | | |

 $^{\scriptscriptstyle 1)}~$ DIN 1319 / ISO 3534, related to measured length

test conditions: measuring length 10 m, constant conditions in: temperature (20 °C), distance, velocity, illumination

²⁾ depending on the version and configuration

- $^{\scriptscriptstyle 3)}~<$ 0,05 % within the working distance range and
 - < 0,2 % within the extended working range

Technical Data